CLAIMS

What is claimed is:

1. A method, comprising controlling packet loss within a congested network by setting packet bandwidths over selected communication links within the network at one or more control points thereof, such packet bandwidths being set at critical values determined by monitoring congestion on one or more communication links of the network downstream from the control points.

2. The method of claim 1 wherein the critical values are determined according to buffer occupancy levels at the control points.

3. The method of claim 1 wherein the critical values are determined according to a periodic sweep.

4. The method of claim 3 wherein the periodic sweep is performed using a monotonically decreasing function.

5. The method of claim 1 wherein the packet bandwidths are set by varying an inter-packet delay time over the selected communication links at the control points.

6. A method, comprising monitoring buffer occupancy level at a control node of a network as present output rate from the control node is decreased, and setting the packet output rate at a value corresponding to a phase transition point in the buffer occupancy level.

7. The method claim 6 wherein the packet output rate is decreased according to a decaying exponential function.

8. The method of claim 6 wherein the packet output rate is decreased monotonically.

9. The method of claim 6 further comprising periodically determining whether the phase transition point has changed reliable to the packet output rate and resetting the packet output rate accordingly.

10. The method of claim 6 wherein the phase transition point corresponding to a change in buffer occupancy from a normal level to a level at or near a maximum buffer capacity.

11. A method, comprising setting an inter-packet transmission time for a control node in a network according to buffer occupancy levels in the control node.

12. The method of claim 11 wherein the inter-packet transmission time is set to a point corresponding to a phase transition in the buffer occupancy levels.

13. The method of claim 12 wherein the phase transition corresponds to a change in buffer occupancy from a nominal level to a level at or near a maximum buffer capacity.

14. The method of claim 12 further comprising resetting the inter-packet transmission time according to variation in the phase transition point.

15. The method of claim 12 wherein the phase transition point is determined by monitoring the buffer occupancy level for variable inter-packet transmission times.

16. The method of claim 15 wherein the inter-packet transmission times are varied according to one of: an algorithmic search process, a search process that sweeps from high inter-packet transmission times to low inter-packet transmission times, or a search process that sweeps from low inter-packet transmission times to high inter-packet transmission times.

17. The method of claim 15 wherein the inter-packet transmission times are varied according to a decreasing function.

18. The method of claim 17 wherein the function decreases monotonically.

19. The method of claim 17 wherein the function comprises an exponential function.

20. The method of claim 18 wherein the function comprises an exponential function.